What is claimed is:

1. A method for creating a color transformation table correlating a color signal outputted from a color input device in a color space of said color input device (hereinafter referred to as a transformation source color space) with a color signal in a color space (hereinafter referred to as a transformation target color space) which is different from said transformation source color space, comprising the steps of:

a dividing step of beforehand defining a plurality of regions obtained by dividing the whole of said transformation target color space; and

a color transformation table creating step of creating said color transformation table by using a plurality of color transformation formulas corresponding to said plural regions, respectively, said plural regions being defined at said dividing step.

2. The color transformation table creating method according to claim 1 further comprising the steps of:

a reading step of reading a plurality of color regions on a color chart by said color input device, and outputting a color signal in said transformation target color space corresponding to each of said color

regions from said color input device;

a colorimetric step of measuring said plurality of color regions by a colorimeter, and outputting spectral reflectance corresponding to each of said color regions from said colorimeter;

a classifying step of classifying said spectral reflectance according to which region among said plural regions in said transformation target color space a color signal in said transformation target color space corresponding to said spectral reflectance belongs to; and

a spectral characteristics estimating step of estimating spectral characteristics of said color input device on the basis of said color signal outputted from said color input device at said reading step and said spectral reflectance outputted from said colorimeter at said colorimetric step;

wherein, at said color transformation table creating step, said color transformation formula is created for each of said regions in said transformation target color space on the basis of said spectral reflectance classified at said classifying step and said spectral characteristics estimated at said spectral characteristics estimating step.

3. The color transformation table creating method according to claim 1, wherein said color transformation

table creating step comprises:

a relationship creating step of creating a relationship between a color signal in said transformation source color space and a color signal in said transformation target color space by using said color transformation formula according to each region, for each of said color transformation formulas; and

a creation processing step of creating said color transformation table on the basis of said relationship created for each of said color transformation formulas at said relationship creating step.

4. The color transformation table creating method according to claim 2, wherein said color transformation table creating step comprises:

a relationship creating step of creating a relationship between a color signal in said transformation source color space and a color signal in said transformation target color space by using said color transformation formula according to each region, for each of said color transformation formulas; and

a creation processing step of creating said color transformation table on the basis of said relationship created for each of said color transformation formulas at said relationship creating step.

5. The color transformation table creating method according to claim 1, wherein said transformation target color space is a uniform color space.

6. The color transformation table creating method according to claim 1, wherein said plural regions have regions overlapping on each other.

7. The color transformation table creating method according to claim 1, wherein, at said dividing step, the whole of said transformation target color space is divided according to hue angle to provide said plural regions.

8. The color transformation table creating method according to claim 1, wherein, at said dividing step, the whole of said transformation target color space is divided according to chroma to provide said plural regions.

9. The color transformation table creating method according to claim 1, wherein, at said dividing step, the whole of said transformation target color space is divided according to lightness to provide said plural regions.

10. The color transformation table creating method according to claim 3, wherein said color transformation table creating step further comprises a determining step of determining that a color transformation result is correct when said color transformation result, into which one color signal in said transformation source color space is transformed through a color transformation formula when said relationship is created at said relationship creating step, belongs to a region corresponding to said color transformation formula;

wherein, at said creation processing step, said color transformation table is created on the basis of said color transformation result determined to be correct at said determining step.

11. The color transformation table creating method according to claim 4, wherein said color transformation table creating step further comprises a determining step of determining that a color transformation result is correct when said color transformation result, into which one color signal in said transformation source color space is transformed through a color transformation formula when said relationship is created at said relationship creating step, belongs to a region corresponding to said color transformation formula;

wherein, at said creation processing step, said color transformation table is created on the basis of said color transformation result determined to be correct at said determining step.

12. The color transformation table creating method according to claim 10, wherein when there are a plurality of color transformation results determined to be correct with respect to said one color signal at said determining step, a color transformation result with respect to said one color signal is calculated at said creation processing step on the basis of values relating to distances between said plural color transformation results determined to be correct and boundaries of said regions to which said plural color transformation results belong.

13. The color transformation table creating method according to claim 11, wherein when there are a plurality of color transformation results determined to be correct with respect to said one color signal at said determining step, a color transformation result with respect to said one color signal is calculated at said creation processing step on the basis of values relating to distances between said plural color transformation results determined to be correct and boundaries of said regions to which said plural color

transformation results belong.

14. The color transformation table creating method according to claim 10, wherein when there are a plurality of color transformation results with respect to said one color signal determined to be correct at said determining step, one of said plural color transformation results determined to be correct is selected as a color transformation result with respect to said one color signal at said creation processing step on the basis of values relating to distances between said plural color transformation results determined to be correct and boundaries of said regions to which said plural color transformation results belong.

15. The color transformation table creating method according to claim 11, wherein when there are a plurality of color transformation results with respect to said one color signal determined to be correct at said determining step, one of said plural color transformation results determined to be correct is selected as a color transformation result with respect to said one color signal at said creation processing step on the basis of values relating to distances between said plural color transformation results determined to be correct and boundaries of said regions

to which said plural color transformation results belong.

16. The color transformation table creating method according to claim 10, wherein when there is no color transformation result with respect to said one color signal determined to be correct at said determining step, a color transformation result with respect to said color signal is calculated at said creation processing step on the basis of reciprocals of values relating to distances between said plural color transformation results obtained with respect to said color signal at said relationship creating step and boundaries of said regions to which said respective color transformation results belong.

17. The color transformation table creating method according to claim 11, wherein when there is no color transformation result with respect to said one color signal determined to be correct at said determining step, a color transformation result with respect to said color signal is calculated at said creation processing step on the basis of reciprocals of values relating to distances between said plural color transformation results obtained with respect to said color signal at said relationship creating step and boundaries of said regions to which said respective

color transformation results belong.

18. The color transformation table creating method according to claim 10, wherein there is no color transformation result with respect to said one color signal determined to be correct at said determining step, one of a plurality of color transformation results is selected as a color transformation result with respect to said one color signal at said creation processing step on the basis of reciprocals of values relating to distances between said plural color transformation results obtained with respect to said color signal at said relationship creating step and boundaries of said regions to which said plural color transformation results belong.

19. The color transformation table creating method according to claim 11, wherein there is no color transformation result with respect to said one color signal determined to be correct at said determining step, one of a plurality of color transformation results is selected as a color transformation result with respect to said one color signal at said creation processing step on the basis of reciprocals of values relating to distances between said plural color transformation results obtained with respect to said color signal at said relationship creating step and

boundaries of said regions to which said plural color transformation results belong.

20. The color transformation table creating method according to claim 10, wherein said color transformation table correlates a color signal in said transformation source color space with spectral reflectance according to a color transformation result as a color signal in said transformation target color space.

21. The color transformation table creating method according to claim 11, wherein said color transformation table correlates a color signal in said transformation source color space with spectral reflectance according to a color transformation result as a color signal in said transformation destination color space.

22. The color transformation table creating method according to claim 20, wherein when there are a plurality of color transformation results with respect to said one color signal determined to be correct at said determining step, spectral reflectance of said one color signal is calculated at said creation processing step on the basis of values relating to distances between said plural color transformation

results determined to be correct and boundaries of said regions to which said plural color transformation results belong.

23. The color transformation table creating method according to claim 21, wherein when there are a plurality of color transformation results with respect to said one color signal determined to be correct at said determining step, spectral reflectance of said one color signal is calculated at said creation processing step on the basis of values relating to distances between said plural color transformation results determined to be correct and boundaries of said regions to which said plural color transformation results belong.

24. An apparatus for creating a color transformation table correlating a color signal outputted from a color input device in a color space (hereinafter referred to as a transformation source color space) of said color input device with a color signal in a color space (hereinafter referred to as a transformation target color space) which is different from said transformation source color space, comprising:

a color transformation table creation unit for creating said color transformation table by using a plurality of color transformation formulas

corresponding to a plurality of regions, respectively, said regions being obtained by dividing said transformation target color space.

25. The color transformation table creating apparatus according to claim 24 further comprising:

an input unit for inputting a color signal in said transformation source color space corresponding to each of a plurality of color regions on a color chart, said color signal being obtained by reading said color regions by said color input device;

a colorimeter for measuring said plurality of color regions to obtain spectral reflectance corresponding to each of said color regions;

a classification unit for classifying said spectral reflectance according to which region among said plural regions in said transformation target color space a color signal in said transformation target color space corresponding to said spectral reflectance belongs to; and

a spectral characteristics estimation unit for estimating spectral characteristics of said color input device on the basis of said color signal inputted from said input unit and said spectral reflectance obtained by said colorimeter;

wherein said color transformation table creation unit creates a color transformation formula

for each of said regions in said transformation target color space on the basis of said spectral reflectance classified by said classification unit and said spectral characteristics estimated by said spectral characteristics estimation unit.

26. The color transformation table creating apparatus according to claim 24, wherein said color transformation table creating unit comprises:

a relationship creation unit for creating a relationship between a color signal in said transformation source color space and a color signal in said transformation target color space by using said color transformation formula according to each region, for each of said color transformation formulas; and

a creation process unit for obtaining a relationship on the basis of plural relationships created by using said plural color transformation formulas in said relationship creation unit to create said color transformation table.

27. The color transformation table creating apparatus according to claim 25, wherein said color transformation table creating unit comprises:

a relationship creation unit for creating a relationship between a color signal in said transformation source color space and a color signal

in said transformation target color space by using said color transformation formula according to each region, for each of said color transformation formulas; and

a creation process unit for obtaining a relationship on the basis of plural relationships created by using said plural color transformation formulas in said relationship creation unit to create said color transformation table.

28. A computer readable record medium in which a color transformation table creating program for making a computer realize a function of creating a color transformation table correlating a color signal outputted from a color input device in a color space of said color input device (hereinafter referred to as a transformation source color space) with a color signal in a color space (hereinafter referred to as a transformation target color space) which is different from said transformation source color space is recorded;

said color transformation table creating program making said computer function as:

a color transformation table creation unit for creating said color transformation table by using a plurality of color transformation formulas corresponding to a plurality of regions, respectively, said regions being obtained by dividing said

transformation target color space.

29. The computer readable record medium in which a color transformation table creating program is recorded according to claim 28, wherein said color transformation table creating program makes said computer further function as:

a classification unit for classifying spectral reflectance according to which region among said plural regions in said transformation target color space a color signal in said transformation target color space corresponding to said spectral reflectance belongs to, said spectral reflectance being obtained by measuring each of a plurality of color regions on a color chart by a colorimeter; and

a spectral characteristics estimation unit for estimating spectral characteristics of said color input device on the basis of a color signal in said transformation target color space obtained for each of said color regions by reading said plurality of color regions by said color input device and said spectral reflectance obtained by said colorimeter;

wherein when said color transformation table creating program makes said computer function as said color transformation table creation unit, said color transformation formula is created for each of said regions in said transformation target color space on

the basis of said spectral reflectance classified by said classification unit and said spectral characteristics estimated by said spectral characteristics estimation unit.

30. The computer readable record medium in which a color transformation table creating program is recorded according to claim 28, wherein when said color transformation table creating program makes said computer function as said color transformation table creation unit, said color transformation table creating program makes said computer function as:

a relationship creation unit for creating a relationship between a color signal in said transformation source color space and a color signal in said transformation target color space by using said color transformation formula according to each of said regions, for each of said color transformation formulas; and

a creation process unit for obtaining a relationship on the basis of plural relationships created by using said plural color transformation formulas in said relationship creation unit to create said color transformation table.

31. The computer readable record medium in which a color transformation table creating program is

recorded according to claim 29, wherein when said color transformation table creating program makes said computer function as said color transformation table creation unit, said color transformation table creating program makes said computer function as:

a relationship creation unit for creating a relationship between a color signal in said transformation source color space and a color signal in said transformation target color space by using said color transformation formula according to each of said regions, for each of said color transformation formulas; and

a creation process unit for obtaining a relationship on the basis of plural relationships created by using said plural color transformation formulas in said relationship creation unit to create said color transformation table.